

1. (Unamended) An image display apparatus comprising image display means for displaying a parallax image, a display optical system for guiding light from the image display means to a position of an exit pupil, exit pupil control means for spatially and temporally dividing the exit pupil into a plurality of areas and controlling a passing beam to each other, and image switching control means for controlling switching between parallax images of the image display means in correspondence to passing beams through the respective areas of the exit pupil, wherein a plurality of parallax images are perceived by a single eye of an observer.

2. (Unamended) An image display apparatus comprising image display means for displaying a parallax image, a display optical system for guiding light from the image display means to a position of an exit pupil, and exit pupil control means for controlling a position or a size of the exit pupil in a direction perpendicular to the optical axis, dividing the exit pupil into a plurality of areas, and successively generating the plurality of divided areas of the exit pupil without duplication, wherein the image display means successively displays corresponding parallax images according to beams passing the respective areas thus generated.

3. (Unamended) The image display apparatus according to Claim 1 or 2, wherein said exit pupil has a diameter two to five times larger than a diameter of the pupil of the observer using said image display apparatus.

4. (Unamended) The image display apparatus according to Claim 1 or 2, wherein
any one of the plurality of areas in said exit pupil has a size not more than half a size of the
pupil of the observer using said image display apparatus.

5. (Unamended) The image display apparatus according to Claim 1 or 2, said
image display apparatus being mounted on the head of the observer, wherein said exit pupil
is fixed at the position of the pupil of the observer.

6. (Unamended) The image display apparatus according to Claim 1 or 2, wherein
said exit pupil is divided into a plurality of areas only in the horizontal direction.

7. (Unamended) The image display apparatus according to Claim 1 or 2, wherein
said image display means comprises a transmissive spatial light modulator and said exit
pupil control means comprises a self-emissive spatial light modulator.

8. (Unamended) The image display apparatus according to Claim 1 or 2, wherein
said image display means comprises a self-emissive spatial light modulator and said exit
pupil control means comprises a transmissive spatial light modulator.

9. (Unamended) The image display apparatus according to Claim 1 or 2, wherein
each of said image display means and said exit pupil control means comprises a
transmissive spatial light modulator.

10. (Unamended) The image display apparatus according to Claim 1 or 2, wherein
said exit pupil control means comprises a micro-mirror device.

11. (Unamended) An image display apparatus comprising image display means for
displaying a parallax image, a display optical system for guiding light from the image
display means to a dividing aperture, said dividing aperture having a plurality of apertures,
wherein an arbitrary aperture out of the plurality of apertures is selected as a passing area of
light, and control means for controlling a position of the light-passing aperture in the
cont'd
b) dividing aperture and the parallax image displayed on the image display means.

12. (Unamended) The image display apparatus according to Claim 11, wherein
said dividing aperture has a diameter two to five times larger than a diameter of the pupil
of the observer using said image display apparatus.

13. (Unamended) The image display apparatus according to Claim 11, wherein
any one of the plurality of apertures in said dividing aperture has a size not more than half a
size of the pupil of the observer using said image display apparatus.

14. (Unamended) The image display apparatus according to Claim 11, said image
display apparatus being mounted on the head of the observer, wherein said dividing
aperture is fixed at the position of the pupil of the observer.

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15. (Unamended) The image display apparatus according to Claim 11, wherein
said dividing aperture is divided into a plurality of apertures only in the horizontal direction

16. (Unamended) The image display apparatus according to Claim 11, wherein
said image display means comprises a transmissive spatial light modulator and said
dividing aperture comprises a self-emissive spatial light modulator.

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17. (Unamended) The image display apparatus according to Claim 11, wherein
said image display means comprises a self-emissive spatial light modulator and said
dividing aperture comprises a transmissive spatial light modulator.

18. (Unamended) The image display apparatus according to Claim 11, wherein
each of said image display means and said split aperture comprises a transmissive spatial
light modulator.

19. (Unamended) An image input apparatus comprising imaging means for
imaging an object, an imaging optical system for guiding light from the object to the
imaging means, aperture generating means for spatially and temporally dividing a pupil of
the imaging optical system into a plurality of areas and controlling a passing beam to each
area, and control means for controlling switching between parallax images taken by the
imaging means in correspondence to the respective areas of the pupil so as to effect input
of the parallax images.

20. (Unamended) An image input apparatus comprising imaging means for imaging object information, an imaging optical system for guiding light from an object to the imaging means, aperture generating means for controlling a position or a size of a pupil of the imaging optical system, dividing the pupil into a plurality of areas, and limiting a beam-passing area, and control means for making the imaging means successively take corresponding parallax images according to positions of the aperture of the pupil.

21. (Unamended) The image input apparatus according to Claim 19 or 20, wherein said pupil is divided into a plurality of areas only in the horizontal direction.

22. (Unamended) The image input apparatus according to Claim 19 or 20, wherein said aperture generating means comprises a transmissive spatial light modulator.

23. (Amended) A stereoscopic display system comprising the image display apparatus of Claim 1, 2, or 11, and further comprising an image input apparatus comprising imaging means for imaging an object, an imaging optical system for guiding light from the object to the imaging means, aperture generating means for spatially and temporally dividing a pupil of the imaging optical system into a plurality of areas and controlling a passing beam to each area, and control means for controlling switching between parallax images taken by the imaging means in correspondence to the respective areas of the pupil so as to effect input of the parallax images.

Cancelled

24. (Unamended) A stereoscopic display system comprising imaging means for imaging an object, an imaging optical system for guiding light from the object to the imaging means, aperture generating means for spatially and temporally dividing a pupil of the imaging optical system into a plurality of areas and controlling a passing beam to each area, control means for controlling switching between parallax images taken by the imaging means in correspondence to the respective areas of the pupil so as to effect input of the parallax images, image display means for displaying a parallax image, a display optical system for guiding light from the image display means to a position of an exit pupil, exit pupil control means for spatially and temporally dividing the exit pupil into a plurality of areas and controlling a passing beam to each area, and image switching control means for controlling switching of the parallax images taken by the imaging means, to the parallax images on the image display means in correspondence to passing beams through the respective areas, wherein a plurality of parallax images are perceived by a single eye of an observer.

25. (Unamended) The stereoscopic display system according to Claim 23, wherein a position and a size of the pupil of said imaging optical system are approximately equal to those of said exit pupil.

26. (Cancelled)

27. (Cancelled)

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29. (Cancelled)

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31. (Cancelled)

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45. (Cancelled)

46. (Cancelled)

47. (Cancelled)

48. (Cancelled)

Please add New Claims 49 and 50 as follows:

-- 49. (New) A stereoscopic display system comprising the image display apparatus
of Claim 1, 2, or 11, and further comprising an image input apparatus comprising imaging
means for imaging object information, an imaging optical system for guiding light from an